

REMARKS

Claims 2, 7-11, 13-15, and 17-20 are pending in this application, with claims 2, 7-11 and 17-18 withdrawn from consideration. Claims 13-15 and 20 are amended herein. Upon entry of this amendment, claims 2, 7-11, 13-15, and 17-20 will be pending, with claims 2, 7-11 and 17-18 withdrawn from consideration. Entry of this amendment and reconsideration of the rejections are respectfully requested.

No new matter has been introduced by this Amendment. Support for the amendments to the claims is detailed below.

Claims 13-15, 19-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. (Office action paragraph no. 3)

Reconsideration of the rejection is respectfully requested in view of the amendments to the claims.

1) The Examiner states that it is unclear where the substrate is positioned in the phrase: “comprising a substrate for supporting the plurality of single cells.” The Examiner also states that the phrase “the electrolyte of each single cell being disposed on the substrate and separated by a predetermined space from adjacent electrolytes” is unclear, because the electrolyte is already being supported on the substrate, because of the preceding phrases “comprising a substrate for supporting the plurality of single cells” and “single cells each having an electrolyte.”

In response, claims 13-15 have been amended to further recite: “the anode and cathode being disposed on the electrolyte and separated by a predetermined space from each other.”

Support for this amendment may be found, for example, in original claim 1 and in the specification at page 7, lines 13-18, where it discloses the fuel cell as comprising a sheet-like substrate 1 and an electrolyte 3, wherein a plurality of electrode elements (single cells) E each comprising a cathode and an anode is disposed on the same surface of the electrolyte 3. This can be seen in Figs. 1 and 2. Therefore, in these Figures, the anode and cathode are on the electrolyte and the electrolyte is on the substrate.

Applicant submits that the structure is clearly defined by the amended claims. Applicant notes that the Examiner called attention to the phrase: “a substrate **for supporting** the plurality of single cells,” but the relationship of the substrate and the electrolyte is recited in the phrase: “the electrolyte of each single cell being disposed on the substrate”

2) The Examiner states that is unclear what is meant by “the electrolyte ... and separated by a predetermined space from adjacent electrolytes,” because the electrolyte is already separated from the next electrolyte because the electrolyte is between the anode and the cathode.

This portion of the rejection is respectfully traversed. Claim 13 recites that the single cells each have an electrolyte, an anode and a cathode. The claim does **not** recite that the anode and cathode in any way form a separation in the electrolyte. In Fig. 1 of the application, the anode and cathode are merely on top of the electrolyte, and in this general structure, the anode and cathode do not form a separation in the electrolyte.

The recitation of the electrolyte of the cell being “separated” from adjacent electrolytes is disclosed in the specification, for example, at page 23, line 8, as illustrated in Fig. 14, and the separation is not caused by the anode and the cathode.

3) The Examiner states that the term “plate-like shape” in claims 15 and 20 is indefinite.

The rejection is overcome by the amendments to claims 15 and 20, in which “a plate-like shape” is amended to –the shape of a plate--.

Claim 13 is rejected under 35 U.S.C. 102(b) as being anticipated by Matsushima et al. (5,786,105). (Office action paragraph no. 4)

The rejection of claim 13 is respectfully traversed and reconsideration of the rejection is requested.

The Examiner cites Matsushima as disclosing a solid oxide fuel cell including a substrate having a plurality of gas supply passages and gas return passages, with a solid electrolyte formed on a first surface of the substrate, an electrode formed on the solid electrolyte and an interconnector formed on a second surface of the substrate.

Applicant notes that Matsushima’s invention is generally described at column 5, line 60, to column 6, line 19, with reference to Figs. 1A, 1B, 1C and 1D. In these drawings, single cell 5 comprises a power generation portion in which individual layers of a solid oxide electrolyte 2 and a second electrode 3 are formed on one surface of an electrode substrate 1, and an interconnector 4 is provided on the side of the substrate 1 opposite the surface on which the power generation portion is formed (column 5, line 66, to column 6, line 5). These drawings only illustrate a single cell 5, however.

In traversing the rejection, Applicant respectfully submits that the Examiner has not pointed out where the reference discloses a plurality of single cells. Applicant notes that the reference uses the term “plurality of cells” or “plurality of single cells” three times: at column 1, line 38, with regard to the prior art; at column 4, line 19, with regard to Fig. 4A; and at column 11, line 30, with regard to Matsushima’s invention. At column 11, line 30, the reference discloses that “a plurality of cells are **contacted in a face-to-face arrangement** through conductors and encased in a shell to form a module” (emphasis added).

The only illustration of a plurality of single cells appears to be in Figs. 4A-E of the reference, as disclosed at column 7, lines 21 and ff. The single cells 5 are positioned by the cell supporting plate 41 and the cell holding plate 40.

Each single cell 5 in Matsushima appears **to have its own substrate 1**. That is, in Matsushima, there is no “substrate for supporting the plurality of single cells” and there is **no single substrate** on which the electrolytes of each single cell are disposed.

Moreover, the electrolytes 2 of each single cell 5 of Matsushima are not disposed on the substrate 1 having a predetermined space from each other.

In addition, the electrolytes 2 of each single cell 5 of Matsushima are not located on the cell holding plate 40. Even if plate 40 of Matsushima is taken as corresponding to the substrate of the present invention, the electrolytes of each single cell in Matsushima are not located on the substrate.

Moreover, Matsushima does not disclose the clarifying limitation added to claim 13: “the anode and cathode being disposed on the electrolyte and separated by a predetermined space from each other.”

Claim 13 is therefore not anticipated by Matsushima et al.

Claims 13, 15 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamanaka et al. (JP 2002-329506). (Office action paragraph no. 5)

Reconsideration of the rejection is respectfully requested in view of the amendments to the claims.

The Examiner cites Yamanaka for disclosing a cell plate for a fuel cell where a plurality of single cells are formed in the same cell plate by laminating first electrode layers (2), solid electrolyte layers (3) and second electrode layers (4) so as to cover a plurality of openings formed on a substrate (1). The Examiner states that the single cells are serially connected by sequentially electrically connection a first electrode layer (2) the second electrode layer (4) of an adjacent cell.

However, Applicant submits that Fig. 1 of Yamanaka illustrates a single cell, and includes a substrate 1 with first electrode layer 2 on the substrate, followed by solid electrolyte layer 3 and second electrode layer 4. Therefore, in Yamanaka, the solid electrolyte layer **is not disposed on the substrate**, but rather is disposed on the first electrode layer.

Moreover, Figs. 3 and 4 of Yamanaka illustrate an embodiment with a plurality of cells, and this is a set of stacked cells, with each cell having a separate substrate. This is not a disclosure of a substrate (that is, one substrate) for supporting the plurality of single cells.

Claims 13, 15 and 20 are therefore not anticipated by Yamanaka et al.

Claims 13-14 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshikata et al. (7,517,601). (Office action paragraph no. 6)

Withdrawal of the rejection is respectfully requested in view of the attached Declaration under 37 CFR 1.132, which removes Yoshikata et al. (U.S. Patent No. 7,517,601) as prior art.

The Declaration under 37 CFR 1.132 affirms that Yoshikata et al. '601 has same inventorship as the present invention (Kuniaki YOSHIKATA, Hirotooshi SAKAMOTO, and Koichi MIKAMI). Accordingly, Yoshikata et al. '601 was not invented "by another" and is not prior art under 35 U.S.C. 102(e).

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,
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Enclosure: Declaration under 37 CFR 1.132 signed by Mr. Kuniaki Yoshikata